Preventing Obesity in Vermont

A Statewide Plan Engaging
Individuals, Organizations, Communities,
Government & Industry

April 2006

Available on the Vermont Department of Health Website
http://HealthVermont.gov/FitandHealthy.aspx

VERMONT

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Agency of Human Services

May 2006

Dear Vermonter,

We are pleased to share with you the Fit and Healthy Vermonters Obesity Prevention Plan. This plan is closely aligned with, and builds upon, the Blueprint for Health, Vermont's initiative to address the burden of chronic diseases. This plan focuses on prevention with strategies to increase physical activity and improve healthy eating for Vermonters of all ages.

Nothing is more important to our future than our health. That is why it is so critically important to move forward with this comprehensive effort to encourage and coordinate health education, nutrition, and activity programs for all Vermonters. This plan provides a road map for our work ahead and outlines how we will measure progress towards our goals.

We are already making progress in many areas. For the coming school year, all Vermont schools will have a written wellness policy in place, establishing guidelines for physical activity and healthy eating. More and more communities have physical activity programs that are open and accessible to everyone. And we have many highly motivated groups and individuals working together, and committed creating a healthier, more active future for all Vermonters.

Still, there is much work to do and we encourage every Vermonter to get involved.

We especially want to thank all of the people who worked with the Department of Health to create this plan. Together we have set ambitious goals for the future. Your continued support and leadership are essential if we are to provide every Vermonter with the opportunity to become fit and healthy.

Sincerely,

Paul E Jarris, MD

Paul Jarris, MD
Commissioner of Health

Sincerely,

Sharon M. Moffatt RN MSN

Sharon Moffatt, RN, BSN, MSN
Deputy Commissioner of Health

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EXECUTIVE SUMMARY

Obesity is quickly becoming a leading public health challenge in Vermont. Over half of all Vermont adults are overweight or obese, putting them at significant risk for chronic conditions like heart disease, high blood pressure, and diabetes, as well as some forms of cancer. Overweight among children is increasing at an alarming rate, more than doubling over the past 20 years. This obesity epidemic is putting our children at risk for an array of health problems at an earlier age than ever before.

The Fit & Healthy Vermonters plan is Vermont's outline for preventing obesity. It provides a framework for increasing physical activity and improving nutrition across multiple areas. It includes actions to be taken by government, social service and health agencies, communities, work sites, schools, early childcare programs, families and individuals. And, it calls for changes in policy to promote and support these actions.

The plan was developed with input and recommendations from a wide variety of individuals and organizations, and it is designed to help Vermont achieve the following goals:

- Reduce the prevalence of chronic diseases associated with overweight and obesity
- Reduce the proportion of Vermonters who are above a healthy weight
- Increase fruit and vegetable consumption
- Reduce portion sizes
- Reduce consumption of sugar-sweetened beverages
- Increase physical activity
- Decrease sedentary behaviors
- Increase breastfeeding initiation, exclusivity and duration

The plan is closely aligned with the Vermont Blueprint for Health chronic care initiative designed to address the growing burden of chronic diseases. Building on the chronic care model, the Vermont Blueprint for Health uses public and private partnerships to create a system of health care that improves the lives of individuals with, and at risk for, chronic conditions. Fit & Healthy Vermonters focuses on the prevention components of the Vermont Blueprint for Health with strategies to improve healthy eating and increase physical activity for Vermonters of all ages.

For information on Vermont's obesity prevention program call 802-863-7330. The obesity prevention plan is also available on the Vermont Department of Health Website: http://HealthVermont.gov/FitandHealthy.aspx

Priority Actions for Target Areas

Agencies and organizations will make formal agreements to collaborate and provide leadership, active involvement and commitment to meet the Fit & Healthy Vermonters objectives.

Health Care

Vermonters will be served by a health care system that invests in and recognizes quality.

- Quality improvement measures will include evidence-based assessments and interventions to reduce the proportion of people who are overweight or obese.
- Primary care providers (pediatrics, family practice and internal medicine) and related health care professionals will routinely measure and record Body Mass Index (BMI) and provide counseling and/or referral for patients.

Communities

Vermonters will live in communities that support healthy eating and physical activity.

- Planning projects including comprehensive plans, zoning and subdivision ordinances will include ways to increase accessibility and availability of opportunities for healthy eating and physical activity.
- Cities and towns will have an organized physical activity program that is accessible to all community members.
- Community organizations including faith-based organizations, non-profit organizations and social clubs will support members in increasing healthy behaviors.

Work sites

- Employers will have policies in place to promote healthy behaviors.
- Employers will offer physical activity and nutrition programs that support healthy behaviors among employees.

Schools

- All Vermont schools will have a nutrition and physical activity policy in place.
- Schools will implement programs or services based on their written policy.
- Schools will collaborate with local partners to increase opportunities for nutrition and physical activity.

Early Childcare

- Licensed early childcare providers will have a nutrition and physical activity policy in place.
- Licensed early childcare providers will implement programs or services based on their written policy.
- Licensed early childcare providers will have the skills necessary to provide a healthy nutrition and activity environment for children.

Breastfeeding

Breastfeeding will be the norm for infants and part of a healthy diet for a year or longer.

- Evidence-based practices and policies that support breastfeeding will be implemented by health care providers and insurers.
- Vermont hospitals will adopt evidence-based maternity care practices to become Baby Friendly hospitals in support of breastfeeding.
- Employers will provide employee benefits and services that support breastfeeding families.
- Peer counseling programs to support breastfeeding mothers will be increased.

Individuals and Families

Individuals and families will be fully informed and have the skills to manage their health to prevent obesity and related chronic diseases.

- Individuals and families will receive messages and tools that increase knowledge and skills for healthy eating and physical activity.
- Individuals and families will have access to programs on physical activity, healthy eating, cooking and shopping.
- Programs will be available to individuals and families at low or no cost, and free of barriers to participation such as childcare and transportation services.

INTRODUCTION

The United States is experiencing increases in overweight and obesity that cut across all ages, racial and ethnic groups, and both genders. Based on height and weight measurements in the 2003-2004 National Health and Nutrition Examination Survey (NHANES), 32 percent of U.S. adults over 20 were obese. This is in contrast with the late 1970s, when an estimated 15 percent of adults were obese.

Body Mass Index (BMI) is calculated using an individual's height and weight, and for most people correlates with their amount of body fat. An adult with a BMI between 25 and 29.9 is considered overweight, while an adult with a BMI of 30 or higher is considered obese. For children and adolescents BMI is calculated based on height, weight, age and gender. Among youth the labels "at risk for overweight" and "overweight" are used instead of "overweight" and "obesity."

Compared to the United States, Vermont's data indicates a similar trend in the rates of overweight and obesity. According to self reported data from the 2003 Behavioral Risk Factor Surveillance System, (BRFSS) over half of Vermont adults are above a healthy weight (56 percent) and one in five adults is considered obese.

Among school-age youth in grades 8–12, one quarter (24 percent) of Vermont students are above a healthy weight (Vermont Youth Risk Behavior Survey, 2005). Overweight among our youngest Vermonters is increasing at an alarming rate, more than doubling in the last 20 years. Currently in Vermont, 29 percent of low-income children between two and five years of age participating in the Women, Infants and Children (WIC) program are overweight or at risk of becoming overweight (Pediatric Nutrition Surveillance Survey, 2002).

In 2004, the Vermont Department of Health received a capacity-building grant from the Centers for Disease Control and Prevention (CDC) for the prevention of obesity and related chronic diseases. Planning activities undertaken to date include: hiring of Obesity Prevention Program staff, a comprehensive review of obesity prevention literature, a review of state and national data, and a review of best and promising practices for obesity prevention. These activities were used to identify potential strategies to adopt in Vermont.

To further develop the Fit and Healthy Vermonters obesity prevention plan, an inventory of existing efforts and programs as well as key informant interviews were conducted providing stakeholders an opportunity to: discuss aspects of their work that address obesity prevention, identify strengths and challenges to addressing the issue, and identify additional strategies for change. Information gathered was presented at several meetings of partners and stakeholders, and used to develop the strategies outlined in the plan.

An overarching premise of the obesity prevention plan is that preventing obesity requires a multidisciplinary, multi–sector partnership of constituents who are committed to working together in a long-term effort. Informed and engaged stakeholders are intrinsic to successful planning and implementation. Discussions at planning meetings gave attention to current data, best and promising practices and current initiatives.

Recognizing the complexity of the issue, and the number of influences on individual behavior, the framework of the social ecological model was used to guide the development of the plan. The model was used to guide the plan in addressing the determinants of behavior at all levels, including:

- ***Individual***—motivating change in behavior by increasing knowledge, changing beliefs and influencing attitudes. Example: targeting behavior change by providing skills, tools and confidence, through education and individual counseling.

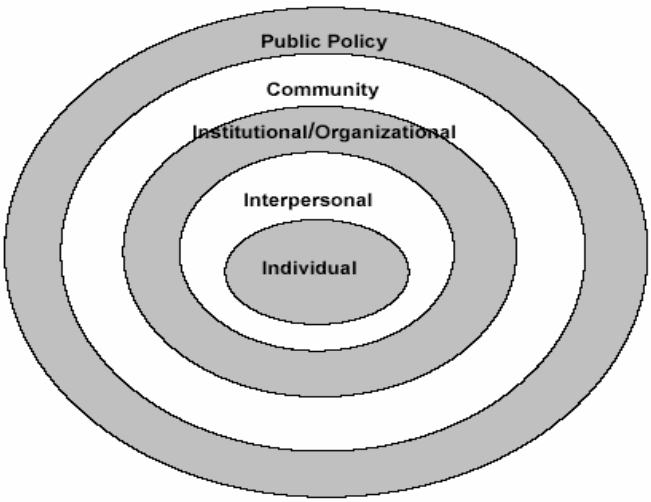
- ***Interpersonal***—providing social support and identity. Groups include families, friends and peers. Examples: providing written information to parents regarding healthy meals, using peer influence through clubs and other activities, developing buddy systems for physical activity.

- ***Organizational***—changing policy, practices and the physical environment of an organization. Examples: offering healthier food options in vending machines, and physical activity prompts in the hallways of buildings.

- ***Community***—changing social networks, norms and practices among organizations and coordinating efforts of members of the community to bring about change. Examples: expanding community gardens and farmers markets, and increasing opportunities for physical activity by providing bike trails and safe walking routes.

- ***Public Policy***—developing and enforcing state policies and laws that increase positive health behaviors. Examples: enacting legislation requiring schools to have a policy regarding foods served and sold, daily physical activity requirements, and government agencies working collaboratively to leverage resources for change.

The obesity prevention plan uses the social ecological model to outline strategies for prevention across the focus areas of agencies and organizations, health care, communities, work sites, schools, early childcare, breastfeeding, and individuals and families.



Obesity Prevention and the Vermont Blueprint for Health

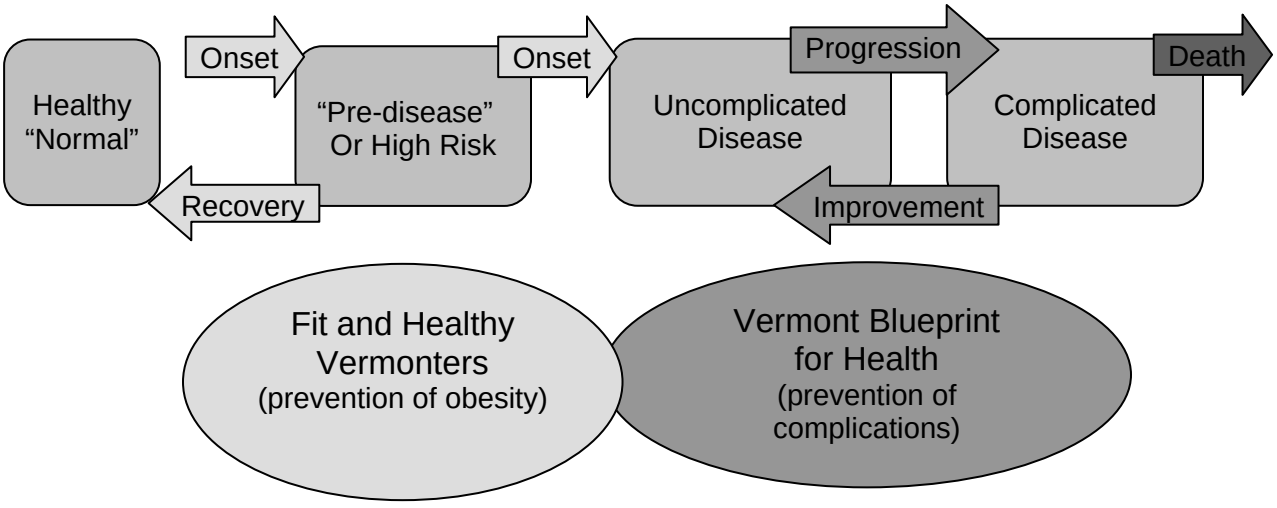
The Fit and Healthy Vermonters obesity prevention plan is closely aligned with and builds upon the Vermont Blueprint for Health. The Blueprint is Vermont's innovative solution to address the burden of chronic diseases. Building on the chronic care model, the Blueprint uses public and private partnerships to create a system of care that improves the lives of individuals with and at risk for chronic conditions.

Synchronizing various planning processes is essential for harnessing the resources of a small state to maximize potential. This is achieved by recognizing the interrelatedness of numerous public health issues to identify the common ground on which to build. For obesity and chronic disease, the relationship was clear, calling for a unified approach to addressing both public health issues. Fit and Healthy Vermonters complements the Blueprint by providing the prevention component of the chronic care model and supporting the work of increasing healthy eating and physical activity.

Both the Fit and Healthy Vermonters plan and the Blueprint represent a multidisciplinary, multisector collaborative approach to working with Vermont stakeholders. Focus areas in the obesity prevention plan align with the Blueprint and include self-care for individuals and families, communities, provider practice and the health-care system, as well as schools, work sites, early childhood and public health agencies.

The Blueprint and Fit and Healthy Vermonters initiatives will work collaboratively to create a system of change that will impact the health of all Vermonters. Both will serve as resources to other state plans that address obesity prevention, to ensure a unified approach with consistent goals, objectives and strategies.

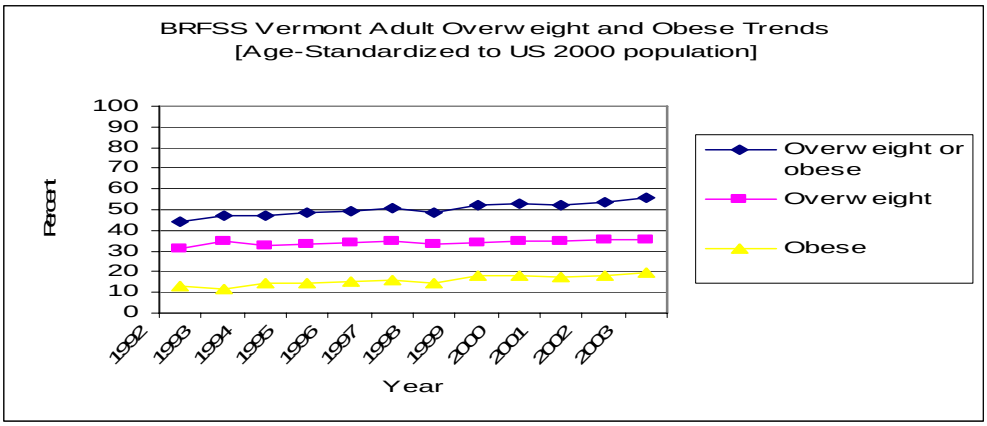
Progression of Chronic Conditions



BURDEN OF OBESITY

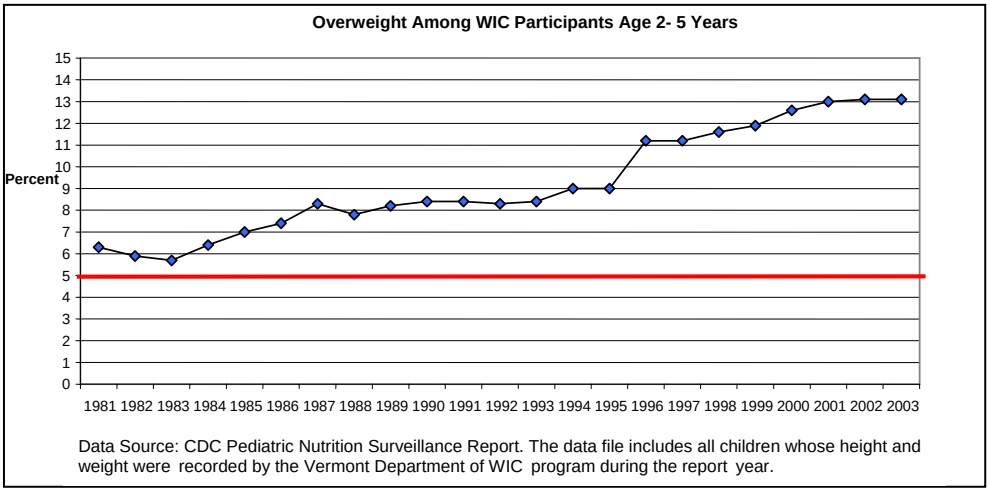
For additional information on the burden of obesity in Vermont see the obesity health status report on the Vermont Department of Health's website at http://healthvermont.gov/fitandhealthy.aspx

Obesity is quickly becoming an epidemic affecting all segments of the population. In 2003, over half (56 percent) of adult Vermonters 18 years and older were overweight or obese, and 11 percent of Vermont youth were overweight. From 1992 to 2003, the prevalence of obesity among adults rose by 51 percent while the prevalence of overweight rose 15 percent.



In 2003, overweight among Vermont youth was not significantly different from the United States as a whole, with a prevalence of 11 percent in grades 8–12. The Healthy Vermonters 2010 goal is: no more than 5 percent of Vermont youth will be overweight, defined as above the 95th percentile for age and gender.

Most startling is the rate of increase in obesity among our youngest population. Data from the WIC program serving children from low-income families shows that among 2–5 year olds, overweight has more than doubled in the past 20 years from 6 to 13 percent.



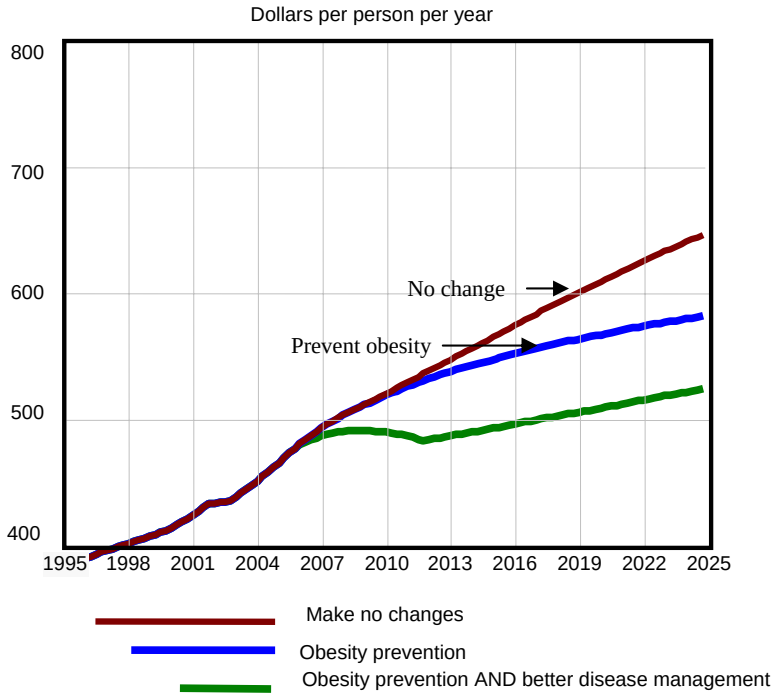
Obesity and Chronic Disease

The impact of obesity and overweight is far-reaching and can lead to many adverse health outcomes, including premature death, heart disease, high blood pressure, diabetes, some forms of cancer, depression and other chronic health conditions.[1] Obesity can also exacerbate chronic conditions, affecting quality of life. Obesity-related health issues may lead to shorter life expectancies, and this is particularly significant for Vermont's children.[2] The epidemic affects children by putting them at risk for chronic conditions at an earlier age.[3] It is believed that one in three children born today will have type 2 diabetes at some point in their lifetime.[4]

Costs

The health consequences of obesity are many, and in turn lead to increased hospitalizations and increased health-care costs, with 83 percent of health-care spending associated with chronic disease. Vermont's annual medical expenses attributable to obesity are approximately $141 million, with $40 million spent on the Medicaid population.[5] The financial burden of diabetes-related obesity is significant, and projections show that health-care costs will continue to rise. Obesity prevention combined with better disease management will have the most impact in reducing costs associated with chronic disease.

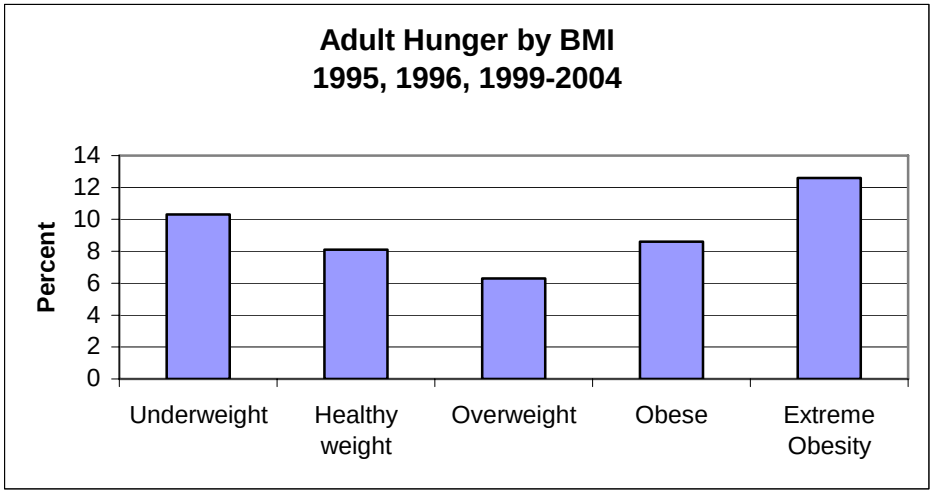
Projected Diabetes Health-Care Costs Per Capita–Vermont[6]



Overweight and obesity result from a combination of metabolic, genetic, behavioral, environmental, cultural and socioeconomic influences. Regardless of the influence, a change in energy balance resulting in excess caloric intake, combined with a decrease in energy expenditure, leads to weight gain.

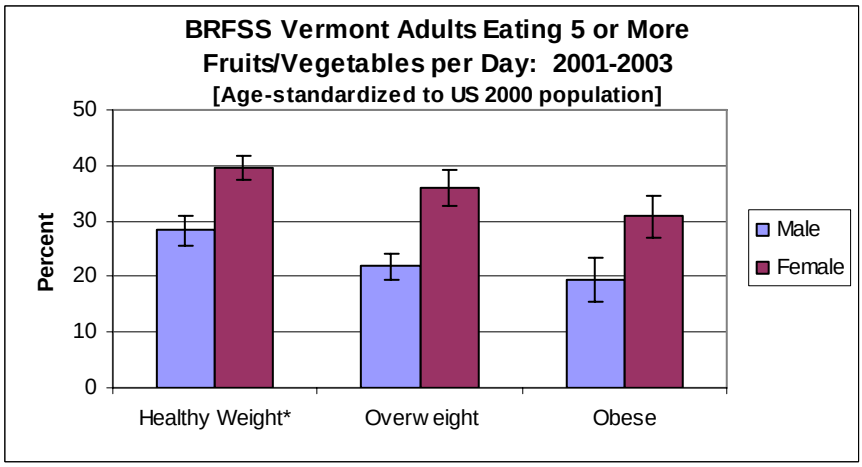
Hunger and Obesity

Data from the Vermont Behavioral Risk Factor Surveillance System indicates that adults who are in the extreme obesity category (BMI $\geq$ 40) report the highest prevalence of experiencing hunger in the past month. Hunger is defined as a feeling in adults who report eating less than they should because there is not enough food or money to buy food. The prevalence of obesity and hunger is highest among lower-income Vermonters.



Weight and Nutrition

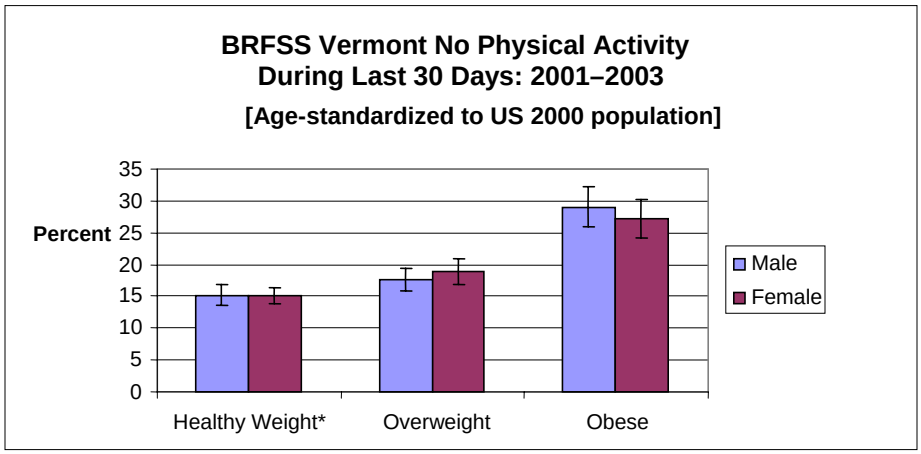
Eating more fruits and vegetables along with whole grains, lean meats and low-fat dairy products, as part of a low-calorie diet, can help people lose and maintain a healthy weight. Healthy-weight adults are more likely than obese adults to eat the recommended five or more fruits or vegetables per day. Women of all weight categories eat more fruits and vegetables than men, although fewer than half of all adults are meeting the recommended daily intake of fruits and vegetables.



*** Healthy Weight category includes all individuals with BMI below 25.**

Weight and Physical Activity

Obese adults are more likely to report having no physical activity for exercise, outside of their regular job, than adults in other weight categories.

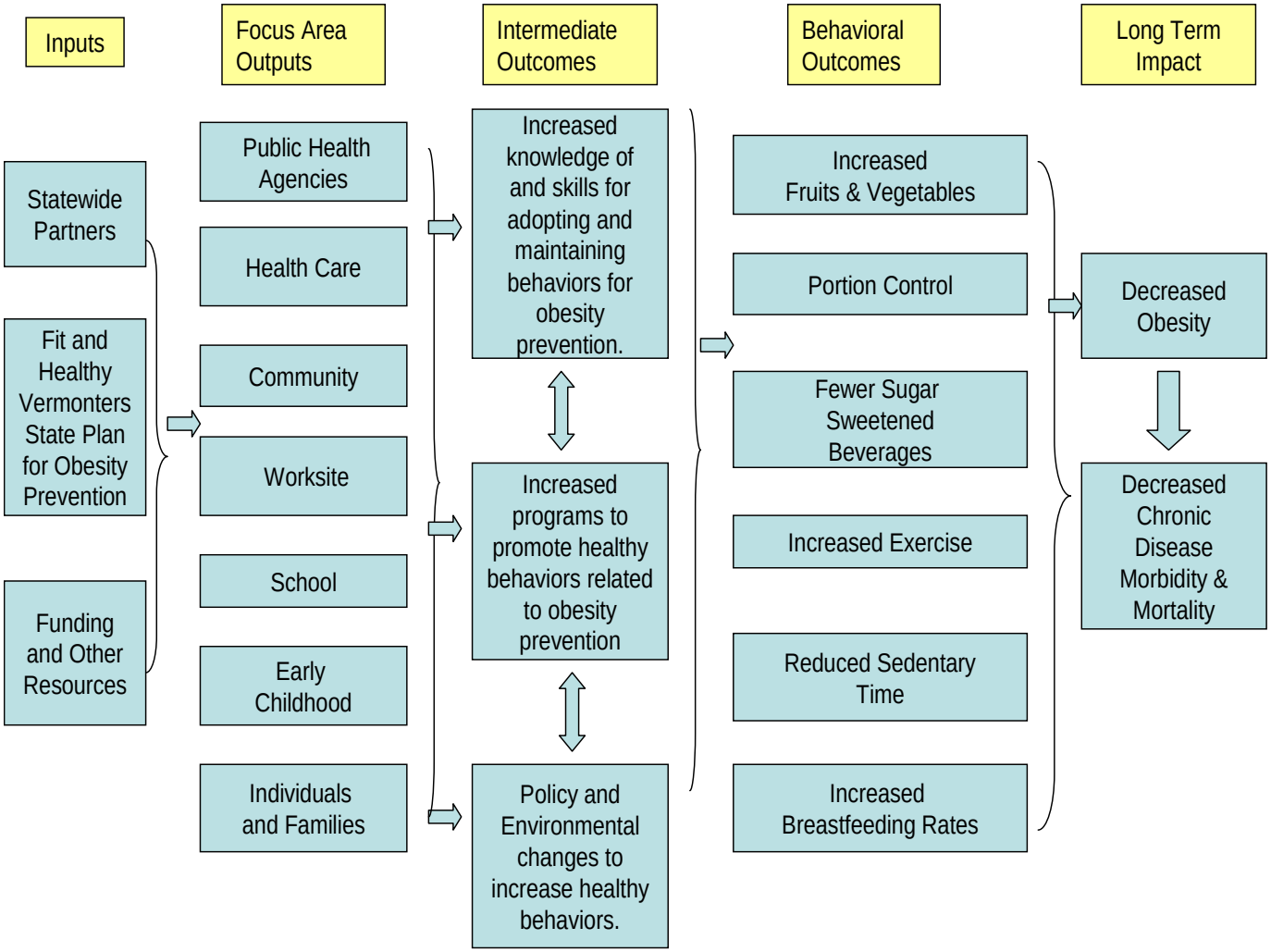


[1] http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_consequences.htm
[2] Olshansky SJ, Passaro DJ, Hershow RC, Layden J, Carnes BA, Brody J, Hayflick L, Butler RN, Allison DB, Ludwig DS. A potential decline in life expectancy in the United States in the 21st century. N Engl J Med, 2005 Mar 17;352(11):1138–1145.
[3] Rocchini AP. Childhood obesity and a diabetes epidemic (editorial). N Engl J Med, 2002 Mar 14;346(11):854-855.
[4] Preventing childhood obesity: health in balance. Institute of Medicine. 2005.www.iom.edu
[5] Finkelstein EA, Fiebelkorn IC, Wang G. State-level estimates of annual medical expenditures attributable to obesity.Obes Res, 2004 Jan;12(1):18-24.
[6] Source: Centers for Disease Control Diabetes Systems Modeling Project, 2005;Vermont Department of Health; (unpublished).

LOGIC MODEL

The Logic Model provides an illustration of the components required to address the long-term outcome of reduced disease risk. The model also demonstrates the multifaceted approach necessary and the long-term commitment required to successfully enable positive change.

Fit and Healthy Vermonters Obesity Prevention Logic Model



OBJECTIVES

As illustrated in the Logic Model, the Long-Term Impact and Behavioral Outcome Objectives identify what the strategies in the Obesity Prevention Plan intend to affect. The Behavioral Outcomes reflect evidence-based research that supports and promotes increased consumption of fruits and vegetables, portion control, fewer sweetened beverages, increased physical activity, reduced sedentary time and increased breastfeeding as effective means of reducing the prevalence of obesity. The Long-Term Impact outcomes serve as indicators of the population's health status and reflect Healthy Vermonters 2010 goals.

Long-Term Impact Objectives

1. **By 2015, reduce the prevalence of chronic diseases as measured by a halt in the increase in the proportion of adults with diabetes at 9 percent.**

2. **By 2010, halt the increase in the proportion of Vermonters who are over healthy weight as measured by:**
   - Adults with BMI $\geq$ 30 to 22 percent
   - Youth grades 8–12 with BMI for age $\geq$ 95th percentile to 9 percent
   - WIC participants age 2–5 with BMI for age $\geq$ 95th percentile to 14 percent

Behavioral Outcome Objectives

1. **By 2010, reduce the average calorie intake of Vermonters by 2 percent, or 50 calories per day** (One of the strategies proposed for reducing total calorie intake is increasing fruit and vegetable consumption, as long as fruits and vegetables are substituted for foods high in energy density).

   a. **Increase by 15 percent, the proportion of Vermonters eating 3+ daily servings of vegetables as measured by:**
      - Adults age 18+ to 51 percent
      - Lower-income adults to 43 percent
      - Youth grades 8–12 to 16 percent

   b. **Increase by 15 percent, the proportion of Vermonters eating 2+ daily servings of fruit as measured by:**
      - Adults age 18+ to 54 percent
      - Lower-income adults to 46 percent
      - Youth grades 8–12 to 43 percent

   c. **Reduce portion sizes** (baseline to be determined)

   d. **Reduce consumption of sugar-sweetened beverages** (baseline to be determined)

2. **By 2010, increase the average calorie expenditure of Vermonters by 8 percent or 38 calories per day.**

    a. **Increase by 15 percent, the proportion of Vermonters with adequate levels of physical activity* as measured by:**
        - Adults age 18+ to 63 percent
        - Lower-income adults to 55 percent
        - Youth grades 8–12 to 31 percent

        *Adequate levels of physical activity are defined for adults and youth as 30 minutes of moderate exercise 5 or more times per week.

    b. **Decrease by 10 percent, the proportion of Vermonters age 2 and over with sedentary lifestyle habits as measured by:**
        - Adults age 18+ with no leisure time physical activity to 16 percent
        - Lower-income adults with no leisure time physical activity to 31 percent
        - Youth grades 8–12 who watch TV/use computer 5+ hours per day to 9 percent
        - WIC participants age 2–5 (TV-watching objective under development)

3. **By 2010, increase breastfeeding rates at birth, 6 months and 1 year postpartum.**

    a. **Increase by 10 percent, the proportion of Vermont women who breastfeed as measured by:**
        - Breastfeeding initiation and breastfeeding in the early postpartum period.
            - All Vermont mothers to 85 percent
            - Mothers participating in WIC to 73 percent
        - Breastfeeding at 6 months
            - All Vermont mothers to 55 percent
            - Mothers participating in WIC to 36 percent
        - Breastfeeding at 1 year
            - All Vermont mothers to 33 percent
            - Mothers participating in WIC to 26 percent

    b. **Increase by 10 percent, the proportion of Vermont women that exclusively breastfeed for at least 6 months as measured by:**
        - Exclusive breastfeeding at 3 months
            - All Vermont mothers to 58 percent
            - Mothers participating in WIC to 34 percent
        - Exclusive breastfeeding at 6 months among all Vermont women to 26 percent

FOCUS AREA OUTPUT MEASURES

The Fit and Healthy Vermonters Obesity Prevention Plan is intended to be a guide for all Vermont partners and stakeholders to use in implementing obesity-prevention initiatives.

The following focus area output measures are the primary objectives that agencies and organizations, healthcare providers, communities, work sites, schools, early childcare providers, and individuals and families, are working to achieve. They serve as measures of progress related to the strategies to be implemented. Progress towards measures will be monitored as implementation of the plan is initiated.

The output measures were identified from existing best and promising practices and further developed through several meetings of partners and stakeholders. The final list of items for inclusion was revised and commented on by a working group of over 50 partners and were included in the final draft plan which was available for comment for three months.

All of the focus areas are interrelated, with implementation of strategies in one focus area promoting the progress and achievement in other areas. They are listed separately for the ease of organization however, success will not be achieved by working in isolation. It will take the community, health-care system, individuals and agencies together.

AGENCIES AND ORGANIZATIONS

Agencies and organizations include local governments, health and human service agencies, and community organizations that focus on the health of populations. Agencies have the ability to establish policies and programs that support and promote positive behaviors. Success requires collaborative efforts across organizations.

Output Measure 1: By 2006, agencies and organizations will have collaborative interagency agreements in place to meet the Fit and Healthy Vermonters objectives.

Strategies

A. Collaboratively research, promote and implement evidence-based and existing "promising" programs that facilitate healthful eating behaviors and regular physical activity across all age groups.
B. Create common messages for nutrition and physical activity that can be used in multiple programs across all age groups.
C. Commit public and private resources (funds and in-kind) to promote messages and services in multiple outlets addressing all other focus areas.
D. Recognize, facilitate and support local and regional networks in Vermont communities addressing nutrition and physical activity.

> Vermont State Nutrition Action Plan Committee
>
> The State Nutrition Action Plan committee (SNAP) is a working group of nutrition program representatives from agencies including the Vermont Departments of Health, Education, Disabilities, Aging and Independent Living, Children and Families, and University of Vermont Extension, Vermont Food Bank, and Vermont Campaign to End Childhood Hunger.
> In a collaborative effort to address the cross-program goal of promoting healthy eating and active lifestyles, the SNAP committee is working to promote the message "Eat for Health." This is just one project that the SNAP committee is undertaking as part of their state nutrition action plan.

Output Measure 2: By 2007, Vermont agencies and organizations will provide leadership, active involvement and commitment to meet the Fit & Healthy Vermonters objectives within their own network and with their external partners.

Strategies

A. Enhance the strength of coalitions working to promote nutrition and physical activity strategies. e.g., SNAP and Governor's Council on Physical Fitness and Sports
B. Ensure that obesity prevention is a priority in efforts to reach underserved populations e.g., work to reduce food insecurity, strengthen the local food system, increase participation in and access to school meals
C. Organizations to develop a system for promoting resources for nutrition and physical activity programs and services e.g., VT 2-1-1 telephone line, AHEC community libraries
D. Public organizations will lead by example, with internal policies and practices that promote healthful nutrition and physical activity.
E. Create a public policy work group to coordinate and orchestrate legislative efforts.

HEALTH CARE

The health care sector is where access and delivery of services are controlled and health policies are established. It is a complex and broad system providing health care at the primary, secondary and tertiary levels.

Output Measure 1: By 2010, quality improvement measures will include evidence-based assessments and interventions to reduce the proportion of people who are obese.

Strategies

A. Identify and disseminate evidence-based practices that meet quality assurance criteria.
B. Insurers reimburse health care providers for measuring BMI and counseling patients.
C. Insurers and accrediting organizations provide incentives for including screening and obesity–preventive services in clinical practice and quality assessment measures.
D. Insurers reimburse for management and follow up of obesity assessments, (BMI measurement, co morbid conditions, and motivational level).
E. Insurers will reimburse for nutrition counseling by state-certified dietitians, and evidence-based interventions that support weight management across the life span.

Output Measure 2: By 2010, one-third of primary care providers (pediatricians, family practice and internal medicine), and related health-care professionals, will routinely measure and record BMI and provide counseling and/or referral for patients.

Strategies

A. Develop and implement use of a tool kit of resources for obesity screening, education on prevention, assessment, treatment and referral based on best practice guidelines.
B. As part of quality improvement health care providers will monitor the consistency of BMI measuring and documentation in medical records.
C. Health care providers will monitor BMI and arrange planned interventions. These include contracts for behavior change and referrals to registered dietitians, or appropriate community programs for counseling and support.
D. Health care providers will include mental health screening, including screening for depression and eating disorders.
E. Training programs and certifying entities will require obesity prevention knowledge and skills in their curricula and examinations.

A Successful Health Care Provider, Patient Partnership

A Rutland physician was seeing a 44 year old, overweight patient, with a lower extremity amputation, diabetes and high cholesterol. She was using 45 units of insulin in addition to some oral medications to control her diabetes. Through physician–initiated collaborative goal-setting, the patient decided that she would swim for physical activity. She started going to the local Comfort Inn and swimming 3 times a week for 40 minutes. She stuck to her goal, and in 6 months lost 25 pounds, lowered her insulin to 5 units a day, dropped her cholesterol 40 points and decreased her HbA1C from 8.8 to 6.9. By working with her health care provider to set goals for self–management, the patient was able to significantly improve her clinical measures.

COMMUNITIES

Communities are made up of the people, institutions and services in a geographic area. They have the ability to promote and support positive behavior changes through assessments, planning and policies. Communities provide a network of naturally occurring relationships between individuals, organizations, and families, providing a social identity that supports attitudes and behavior about health. Healthy communities support healthy lifestyles by providing opportunities for physical activity and good nutrition as a means to prevent chronic conditions.

Output Measure 1: By2010, 75 percent of the 251 municipalities in Vermont, will include ways to increase availability and accessibility of opportunities for physical activity and healthy eating in comprehensive plans, zoning and subdivision ordinances, and other transportation planning and design projects.

Strategies

A. **Disseminate best practice guidelines, to planning commissions and zoning boards, for planning and implementing strategies that provide opportunities for physical activity and healthy eating.**
B. **As a means to measure progress, conduct periodic community assessments of the availability of opportunities for physical activity and healthy eating in the built environment.**
C. **Provide training and technical assistance to planning commissions and zoning boards on ways to increase opportunities for physical activity and healthy eating.**
D. **State agencies collaborate to increase funding and resources for opportunities for physical activity and healthy eating.**
E. **Develop and support a statewide community assessment tool and recognition program for model communities.**

Examples of planning and ordinance changes to increase activity and healthy eating:

- Improve the street, sidewalk, and street-crossing safety of routes to schools in order to encourage/allow students to walk or bike to school on a regular basis.
- Encourage mixed-use zoning with homes situated within walking and bicycle riding distance of attractive, pedestrian-friendly commercial areas.
- Initiate town, city or neighborhood capital improvement projects that include facilities such as sidewalks or bicycle lanes to increase opportunities for physical activity.
- Increase availability and access to supermarkets, farmers markets and community gardens to expand healthy eating options for lower–income Vermonters.
- Work with law enforcement to increase enforcement of speed limits to make communities safer for biking and walking.
- Work with local departments of public works to create safer, traffic calming street designs.

Output Measure 2: By 2010, all cities and towns with a population of 2000 or more will have at least one organized physical–activity program in place that is open to all and promoted as a family activity.

Strategies

A. Cities and towns have an organized coalition of agency representatives and citizens working to implement programs based on evidence–based practices e.g., develop safe routes to school, or walking school bus (a chaperoned walk to school group), programs
B. Community groups and organizations adopt size appropriate strategies to implement, market, and increase program participation within communities e.g., create mapped walking routes
C. Individuals and families who participate in the physical activity program for more than six months are recognized publicly for their effort e.g., family noted in local papers or recognized at community events
D. Communities organize several family–oriented community events throughout the year to promote the physical activity program.
E. Solicit support of partners in manufacturing and retail sector to enhance physical activity programs.

> Community Coalition Creates Walking Trails in Rutland
>
> The Rutland Area Physical Activity Coalition is made up of organizations, individuals and businesses committed to promoting physical activity in Rutland County. They provide educational presentations, coordinate activity programs and advocate for open spaces available to the public. Through social networks, coalition members approached a local land owner in Rutland City and gained permission to allow public access for a trail on a three acre field in the landowners backyard. The Coalition made a trail around the field, put up signs and advertised that it is available to the community. Now, 10–20 people use this open space as a place to walk daily.

Output Measure 3: By 2010, community organizations including faith based organizations, non-profit organizations and social clubs, provide support to members to increase healthy behaviors.

Strategies

A. Community organizations ensure healthy food options are available at functions whenever food is served or sold.
B. Organizations develop social support groups for members e.g., peer led walking groups
C. Integrate the use of health messages into existing programs to increase healthy behaviors.
D. Offer programs, services and resources for healthy behavior change e.g., invite speakers, hold workshops, offer dance classes and dances, and encourage other creative activities

WORK SITE

Work sites have the ability to implement policies that influence behavior change. Both large and small employers can play a role influencing employees and their families.

Output Measure 1: By 2010, all work sites with 25 or more employees will have policies in place to promote healthy behaviors.

Strategies

A. **Employers assure that cafeterias and vending machines offer healthy food choices, and they implement a price structure that favors more nutritious foods.**
B. **Develop policies for incentives to participate in physical activity e.g., allow flex time for physical activity and incentives for active commuting**
C. **Implement policies for food served and sold in meetings, conferences and celebrations.**
D. **Self-insured employers work with health plans to include coverage for BMI assessment, counseling for employees about weight, nutrition and physical activity. Work with health plans to discount premiums for employers offering health promotion programs.**

> Engelberth Construction, Inc. HealthE Wellness Program
>
> HealthE is a voluntary wellness program designed to engage Engelberth Construction, Inc. (ECI) employees in a personal wellness program. ECI recognizes that the success of the company is associated with the quality of their employees. This includes not only technical, leadership and craft skills, but also health and wellness.
> To maintain the quality of their health insurance plan and control costs to employees, ECI switched to a partially self-funded plan. This allows ECI to base their health care costs on their own experience. The more they use the plan, the more they pay in premiums. Acknowledging that health for most individuals is largely determined by habits and behaviors, ECI offers the HealthE wellness program to employees. HealthE has several components, including premium rewards, work site health screenings, and on and off-site physical fitness programs.
> As ECI employees achieve better health, the company believes it will result in lower utilization of health care services, allowing the company to provide their employees with the high quality benefits at an affordable price.

Output Measure 2: By 2010, all work sites with 25 or more employees will offer, on-site or in partnership with the community, physical activity and/or nutrition programs that support accomplishment of Fit and Healthy Vermonters objectives.

Strategies

A. **Compile a tool kit of successful strategies to create a healthy work environment.**
B. **Ensure that stairs are safe for regular use and include point of decision prompts that advise workers about the benefits of using the stairs instead of the elevators.**
C. **Encourage employers to offer comprehensive health and safety programs, including on–site screening, and education.**
D. **Employers will encourage employees to commute on foot or by bicycle e.g., install secure bicycle parking, provide incentives to employees who commute by walking or bicycling.**

SCHOOLS

Schools offer a unique opportunity to reach school–age children. Messages youth receive in school need to be reinforced by families and communities. By promoting a system of learning in an environment conducive to healthy choices, schools can influence choices students will maintain throughout their lives.

Output Measure 1: By 2007, all Vermont schools will have a nutrition and physical–activity policy in place which will incorporate Fit and Healthy Vermonter objectives.

Strategies

A. **Use best–practice guidelines to develop standards for physical activity and nutrition throughout the entire school environment, including before– and after–school programs e.g. Vermont Nutrition and Fitness Policy Guidelines**
B. **Examine school transportation and parking policies that may influence the number of students or teachers who walk or bicycle to school.**
C. **Develop coordinated school health teams to assess, develop, implement and evaluate policies related to nutrition and physical activity.**
D. **Use the CDC-DASH School Health Index to identify strengths and weaknesses, prioritize changes and evaluate progress.**
E. **Propose legislation as needed to implement policy changes.**

Vermont FEED

Vermont Food Education Every Day (VT FEED) is a community-based approach to school food system change through the collaboration of three Vermont nonprofits: Food Works, Northeast Organic Farming Association of Vermont, and Shelburne Farms. VT FEED works with schools and communities to raise awareness about healthy food, the role of Vermont farms and farmers, and good nutrition by connecting the 3 C's: the Classroom, through curriculum and professional development for teachers; the Cafeteria, by incorporating local and seasonal produce and professional development into the school food program; and the Community, through community forums of farmers, parents and other community members. Some VT FEED projects include growing food in a school garden, visiting local farms, incorporating food, farm, and nutrition into existing curriculum, and participating in taste tests of new foods for the school food program.

At Hardwick Elementary, monthly taste tests, feature vegetables grown in the school gardens or raised on a local farm. Classroom volunteers prepare the taste test, serve it to other classes, survey students for preference, and then feature the food at lunch the next day. Meanwhile, teachers are incorporating food and cooking into their math programs, History of Hardwick, or art and vegetable classes. When there is a surplus of produce on the local farm, the food service director and community members meet after hours to process the vegetables and freeze for future use.

Output Measure 2: By 2010, all Vermont schools will implement at least three programs or services based on their written policy.

Strategies

A. Provide incentives to schools that display model obesity–prevention activities.
B. Utilize assessment tools of healthy student behaviors related to obesity prevention to prioritize programs e.g., Vermont Youth Risk Behavior Survey and Youth Health Survey
C. Hold regional trainings for school staff on strategies related to implementing components of a nutrition and physical–activity policy.
D. Enhance health curricula to promote nutrition physical activity and reduce sedentary behaviors, and improve energy balance. Health curricula will include a behavioral skills focus and be integrated across school curriculum e.g., include health education on safe walking or bicycling.
E. Offer nutrition and physical–activity programs that connect the community, and classroom e.g., Vermont FEED, and Safe Routes to School

Output Measure 3: By 2010, all Vermont schools will work with external partners to increase opportunities for nutrition and physical activity.

Strategies

A. Work with health care providers and parents to assure that all children have a medical home for health care services and are seen for routine health screenings.
B. Work with the community to provide students with safe ways to walk or bicycle to school.
C. Communicate with parents about healthy behaviors at home that support health education taught in school.
D. Make school facilities available to community members after school and on weekends for recreation.
E. Build schools within walking and bicycling distance of the neighborhoods they serve.

Safe Routes to Schools

Even in a rural state such as Vermont, students, parents and teachers find creative and fun ways for students to walk or bike to school. Three Vermont schools are piloting the Safe Routes to Schools (SR2S) program through the Chittenden County Metropolitan Planning Organization. The program encourages communities to find safe ways for students to bike and walk to school as opposed to taking the bus or being driven. The goal is to create healthier lifestyles for students and a safer, cleaner environment for all. Some of the pilot–site activities include offering drop-off points away from the school where students and parents congregate to walk to school as a group, and implementing "walking school buses" and "Walking Wednesday" programs, with music, mascots and giveaway incentive items.

EARLY CHILDCARE

Early childhood years are the formative years in a child's development, and behaviors established in childhood are often carried through to adulthood. Behaviors modeled in early childcare provider settings should be replicated at home. Strategies targeting families are outlined separately.

Output Measure 1: By 2010, all Vermont licensed early childcare providers will have a nutrition and physical–activity policy in place.

Strategies

A. Use best–practice guidelines to develop standards for physical activity, active play and all foods served or offered in early childcare settings.
B. Using existing standards and guidelines, conduct assessments to identify strengths and weaknesses to prioritize changes within childcare settings.
C. Conduct regional trainings of early childcare providers on best practices and policy development, utilizing existing resources such as childcare resource and referral.

Output Measure 2: By 2010, all Vermont licensed early childcare providers will implement at least three activities or services based on their written policy.

Strategies

A. Develop a list of best–practice programs that early childcare providers can implement e.g., Fit WIC activity guide
B. Provide incentives to early childcare providers who model obesity–prevention activities. E.g., funding for equipment, recognition from the Governor for participating in the Daylight Savings Challenge.
C. To identify program priorities, implement assessment tools of healthy behaviors related to obesity prevention.

Output Measure 3: By 2010, all Vermont licensed early childcare providers will have the skills necessary to provide a healthy nutrition and physical activity environment for children.

Strategies

A. Develop core competencies focusing on nutrition and physical activity for entry level early childhood educators. Assess and enhance current curriculum standards used.
B. Provide training, education and programs on developmentally and age–appropriate foods and physical–activity requirements.
C. Provide parents with tools to increase their ability to reinforce healthy behaviors taught in early childcare settings.

Fit WIC a Big Success with Childcare Providers

Lynn Kostur and Eddie DeMott from the Health Department's St. Johnsbury district office want childcare providers to play! For the past three years, they have offered free Fit WIC training sessions to childcare providers in local communities as part of a statewide effort to help families build physical activity into every day's schedule.

Each training begins with a presentation including data on rising obesity rates in young children, and background information about the Fit WIC project. Then, everyone gets to play like a preschooler, trying out physical activities developmentally appropriate for the 3 to 5 year–old group. Games like "Balance Beam" (walking heel to toe along a line of masking tape on the floor), "Movin' to the Groove" (acting out the motions in *Head, Shoulders, Knees and Toes* or a similar song), and "Stretch Like a Cat, Crouch Like a Lion" turn the theory into practice. At the end, each participant takes home a Fit WIC Educator's Guide, full of helpful hints for adjusting activities for varying skill levels and directions for making low–cost active toys.

A companion guide for parents provides a list of read aloud books with physical activity themes. A playgroup directory and simple instructions for many more active games and toys are also included. In addition to increased active play, one mom reported an unexpected benefit, improved speech.

> "Johanna has a speech problem and gets therapy. Using the games in the kit has really helped her language and vocabulary develop! She's gotten much more confident in expressing herself by playing the games...."

To date, more than 285 childcare providers have attended Fit WIC training, and more than 3500 families have received an activity book.

BREASTFEEDING

Scientific evidence suggests that breastfeeding, especially exclusive breastfeeding for the first 6 months of life, followed by breastfeeding into the toddler years, may impact childhood and adult obesity rates. Studies have found lower rates of several chronic diseases throughout childhood and into adulthood among children who were breastfed, including recent findings suggesting that breastfeeding may reduce the risk of type 1 and type 2 diabetes. Implementing evidence–based practices that increase breastfeeding rates may have a positive influence in reducing the risk for obesity in childhood and later in life. Breastfeeding should be recognized as the normal and preferred practice for feeding infants up to six months, and part of a healthy diet for a year or longer.

Output Measure 1: By 2010, individuals and families, health care providers and insurers will implement evidence–based practices, and policies that support breastfeeding.

Strategies

A. Improve and increase community education efforts:
   - Continue "breastfeeding–friendly community" social marketing targeted to individuals, families, childcare providers, employers and businesses
   - Integrate breastfeeding as a curriculum component of health education in schools
   - Publish list of professional and community breastfeeding resources for families and health care providers

B. Strengthen the breastfeeding education, lactation support and management provided by health care providers to families and individuals:
   - Provide training and continuing education opportunities to health care providers through regional Loving Support trainings, grand rounds and conferences
   - Update content of education curriculum for medical, nursing and other allied health professionals to include lactation, physiology and management

C. Make lactation support that includes behavioral interventions and lactation management available to all Vermont families:
   - Assure that Medicaid and insurance providers include lactation support in standard, reimbursable perinatal care services
   - Establish sustainable, financially supported, walk-in breastfeeding clinics available to all new mothers in the community, staffed by International Board Certified Lactation Consultants (IBCLC) who are reimbursed for all services provided

Output Measure 2: By 2010, 75 percent of Vermont hospitals will have adopted evidence–based maternity care practices in pursuit of Baby–Friendly Hospital status under the WHO/UNICEF initiative.

Strategies

A. Establish partnerships between local breastfeeding coalitions and networks and key decision makers at maternity care facilities to implement evidence-based practices that support breastfeeding.
B. Support hospital staff participation in 18-hour training courses in breastfeeding.
C. Establish links between maternity facilities and community breastfeeding support systems.

Output Measure 3: By 2010, 75 percent of Vermont employers will provide lactation management benefits and services that support breastfeeding families.

Strategies

A. Establish a model lactation support program for all state employees.
B. Work with legislators to increase the protection, promotion and support for breastfeeding mothers in the workforce.
C. Continue work site recognition programs to honor employers who support employees who breastfeed.

Output Measure 4: By 2010, increase the number of peer counseling programs by five.

Strategies

A. Fund one full-time position at the state level to coordinate peer counseling services for all women (not just those eligible for WIC).
B. Replicate and expand the WIC Peer Counseling program to include coverage of all women in selected districts across the state.

Northeastern Vermont Regional Hospital Recognized for Being Baby Friendly

Northeastern Vermont Regional Hospital joined 18 other US hospitals when it received the Baby–Friendly Hospital Award in 2000. NVRH, while adopting the Ten Steps to Successful Breastfeeding, proved their dedication to improve breastfeeding policies, training and practices. Their commitment to implementing the evidence-based practices has created an environment supportive of breastfeeding. The Baby-Friendly Hospital Initiative is a global program sponsored by the World Health Organization and the United Nations Children's Fund to encourage and recognize hospitals and birthing centers that offer an optimal level of care for lactation.
NVRH supports mothers in making health-based decisions on the best infant–feeding options, free of commercial interests, and they provide skilled support for this choice. Data from around the world clearly indicates the positive impact of the Baby Friendly Ten Steps to Successful Breastfeeding on breastfeeding initiation, duration, exclusivity and related child–health outcomes. NVRH through their clinicians, hospital administrators and policymakers, continues to contribute to this endeavor so that mothers and babies enjoy the best start possible. The receipt of this international award is an achievement to celebrate!

INDIVIDUALS AND FAMILIES

Obesity prevention requires strategies that reflect influences on individual and family behaviors. Strategies must promote and support informed decision making and individual-based action. To effectively manage their health, individuals and families must be fully informed and have the skills to undertake lifestyle changes to prevent disease.

Output Measure 1: By 2010, increase individuals' and families' exposure to messages and tools that increase knowledge and skills for healthy eating and physical activity.

Strategies

A. **Develop marketing efforts that encourage individuals and families to increase healthy eating and physical activity, utilizing common messages developed by consumers.**
B. **Develop marketing efforts around community programs e.g., increase utilization of the 2-1-1 information line, and community–based program guides**
C. **Increase the number of grocery stores, restaurants and fast food establishments that provide "point-of-purchase" information promoting the dietary guidelines.**
D. **Support and/or expand programs that increase access and opportunities for physical activity and healthy eating e.g., Farm to Family coupons**
E. **Conduct programs, challenges and events that encourage healthy behaviors e.g., Get Moving Vermont**

Daylight Savings Challenge

"This week I ate healthier, exercised more and watched less television. I feel way better. I am glad we could do this and I think I will do this everyday from now on." This is a quote from a fifth grade girl participating in the Governor's Daylight Savings Challenge. Every spring and fall, Vermont students are encouraged to "Move More, Eat More Colors (fruits and vegetables), and Turn it Off (the television)." Students, teachers, schools and families report creative ways that they take on the challenge, such as having students role–play making healthy or unhealthy choices in a grocery store, dress in the color of their favorite fruit or vegetable, chart physical activity and vegetable intake, and make extra efforts to be active after school instead of watching television.

Output Measure 2: By 2010, individuals and families in a minimum of 20 cities and towns will have access to programs on physical activity, healthy eating, cooking and/or shopping that are based on promising practices and have demonstrated behavior change.
*To assure access, programs offered should be low or no cost and free of barriers to participation such as childcare and transportation services.

Strategies:

A. Conduct a comprehensive survey of existing nutrition and physical–activity programs that are currently available in the state. Use the 2-1-1 telephone information line as one method to capture and disseminate findings.
B. Compile a list of evidence–based or promising practice programs that communities can use to educate individuals about physical activity, healthy eating, cooking and/or shopping.
C. Develop outreach and education efforts that target those who cook and shop for the family.
D. Implement age–appropriate programs in communities that increase the opportunity for individuals to be physically active, such as the Girls on Track program for middle school age girls and SPARK, an after–school physical–activity program for middle school girls and boys.
E. All strategies will incorporate social support as an essential component to adopting and maintaining healthy behaviors.

Cooking for Life

Cooking for Life empowers limited-resource families in Vermont to cook healthy, affordable meals enabling them to stretch family food dollars. Through a collaboration of The Vermont Campaign to End Childhood Hunger and the University of Vermont Extension's Expanded Food and Nutrition Education Program, Cooking for Life provides hands-on nutrition and cooking classes for at-risk populations. These include low-income parents of young children, youth ages 11 to 14, and teens transitioning into independent living. Following every class, participants are provided with recipes and ingredients to practice their newly acquired skills at home. The unique combination of a practical classroom experience, and the opportunity to further develop skills at home, provides participants with the knowledge and tools needed to make life-long dietary changes.

A recent Cooking for Life series in northern Vermont generated community-wide interest in healthy eating. The parents involved in the program were so energized by their experience that they created a nutrition binder and brought in nutrition articles and magazine clippings to review at weekly meetings. The parents were also key players in organizing a Cooking for Life: Youth series at the local after-school program. Two of the parents plan to share their nutrition and cooking skills as volunteer chefs for the series.

Appendix A: Glossary of Acronyms and Terms

BMI	Body Mass Index measured by weight (lb)/[height(in)]^{2}X 703 an indicator of body fatness in most people, used for screening for overweight and obesity
Built Environment	Consists of attributes that make up the physical environment of urban and suburban areas including buildings, roads, homes, schools and other components that make up a community
Overweight	Adult BMI between 25 and 29.9
Obesity	Adult BMI greater than or equal to 30
Morbid Obesity	Adult BMI greater than or equal to 40
At Risk for Overweight	Youth BMI for age, sex and gender between the 85th and 95th percentile
Overweight	Youth BMI for age, sex and gender above the 95th percentile
Evidence–Based	Programs that have demonstrated effectiveness using scientific evaluation methods
Promising Practice	Programs and strategies that may not be evidence–based, yet show potential for improving healthy behaviors
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

Thank you to the many individuals and organizations who contributed to the development of the Fit and Healthy Vermonters Obesity Prevention Plan

American Cancer Society
Area Health Education Centers
Blue Cross Blue Shield of Vermont
Burlington School Food Service
Central Vermont Hospital
Champlain Initiative
Chittenden County Food Shelf
Chittenden County Metropolitan Planning Office
Fletcher Allen Health Care, Community Health Improvement
Hannaford Bros. Company
Maximus
MVP Health Care
Northeastern Vermont Regional Hospital
Office of Vermont Health Access
Southwestern Vermont Medical Center
Subway Restaurants
Two Rivers Ottauquechee Regional Planning Commission
United Way of Chittenden County
University of Vermont, Center for Rural Studies
University of Vermont, College Of Agriculture and Life Sciences
University of Vermont, College of Medicine
University of Vermont, Department of Nutrition and Food Sciences
University of Vermont, Extension
University of Vermont, Office of Health Promotion Research
Vermont Agency of Agriculture, Food and Markets
Vermont Agency of Human Services, Department for Children and Families
Vermont Agency of Human Services, Office of Economic Opportunity
Vermont Agency of Transportation
Vermont Campaign to End Childhood Hunger
Vermont Chapter of the American Academy of Pediatrics
Vermont Children's Health Improvement Project
Vermont Coalition for the Promotion of Physical Activity
Vermont Department of Aging and Independent Living
Vermont Department of Education
Vermont Department of Health
Vermont Department of Housing and Community Affairs
Vermont Dietetic Association
Vermont FEED
Vermont Out of School Time Network
Vermont Principals Association
Vermont State Employees Wellness Program
Vermont State Legislators
Vermont Superintendents Association